zenith

SERVICE MANUAL

Product Type:	LCD TV
Chassis:	ML-024C
Manual Series:	
Manual Part #:	
Model Line:	
Product Year:	2003

Model Series:

L13V36

CONTENTS

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Zenith Electronics Corporation
201 James Record Road
Huntsville, Alabama 35824-1513

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PRODUCT SAFETY

IMPORTANT SAFETY NOTICE

This manual was prepared for use only by properly trained audiovisual service technicians. When servicing this product, under no circumstances should the original design be modified or altered without permission from Zenith Electronics Corporation. All components should be replaced only with types identical to those in the original circuit and their physical location, wiring, and lead dress must conform to original layout upon completion of repairs. If any fuse (or Fusible Resistor) in this TV receiver is blown, replace it only with the factory specified fuse type and rating. When replacing a high wattage resistor (Oxide Metal Film Resistor, over 1W), keep the resistor 10mm away from PCB. Always keep wires away from high voltage or high temperature parts.

Special components are also used to prevent shock and fire hazard.
These components are indicated by the letter "x" included in their component designators and are required to maintain safe performance. No deviations are allowed without prior approval by Zenith Electronics Corporation. Service work should be performed only after you are thoroughly familiar with these safety checks and servicing guidelines.

Circuit diagrams may occasionally differ from the actual circuit used.
This way, implementation of the latest safety and performance improvement changes into the set is not delayed until the new service literature is printed.

CAUTION: Do not attempt to modify this product in any way.
Never perform customized installations without manufacturer's approval.
Unauthorized modifications will not only void the warranty, but may lead to property damage or user injury.

GENERAL GUIDANCE

An Isolation Transformer should always be used during the servicing
of a receiver whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating to protect against personal injury from electrical shocks. It will also protect the receiver and its components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

Before returning the receiver to the customer, always perform an AC leakage current check on the exposed metallic parts of the cabinet, such as antennas, terminals, etc., to be sure the set is safe to operate
without damage of electrical shock.

LEAKAGE CURRENT COLD CHECK (ANTENNA COLD CHECK)

With the instrument's AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs. Place the AC switch in the on position, connect one lead of ohm-meter to the AC plug prongs tied together, and touch other ohm-meter lead in turn to each exposed metallic parts such as antenna terminals, phone jacks, etc. If the exposed metallic part has a return path to the chassis, the measured resistance should be between 1MΩ and 5.2MΩ. When the exposed metal has no return path to the chassis the reading must be infinite. Any other abnormality that exists must be corrected before
the receiver is returned to the customer.

ELECTROSTATICALLY SENSITIVE DEVICES

Some semiconductor (solid-state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on the body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as an ESD mat, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise, seemingly harmless motion, such as the brushing together of your clothing or the lifting of your foot from a carpeted floor, can generate static electricity sufficient to damage an ES device.)

REGULATORY INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna; Increase the separation between the equipment and receiver; Connect the equipment into an outlet on a circuit different from that to which the receiver is connected; Consult the dealer or an experienced radio/TV technician for help.

The responsible party for this device's compliance is:

Zenith Electronics Corporation
201 James Record Road
Huntsville, AL 35824, USA
Digital TV Hotline: 1-800-243-0000

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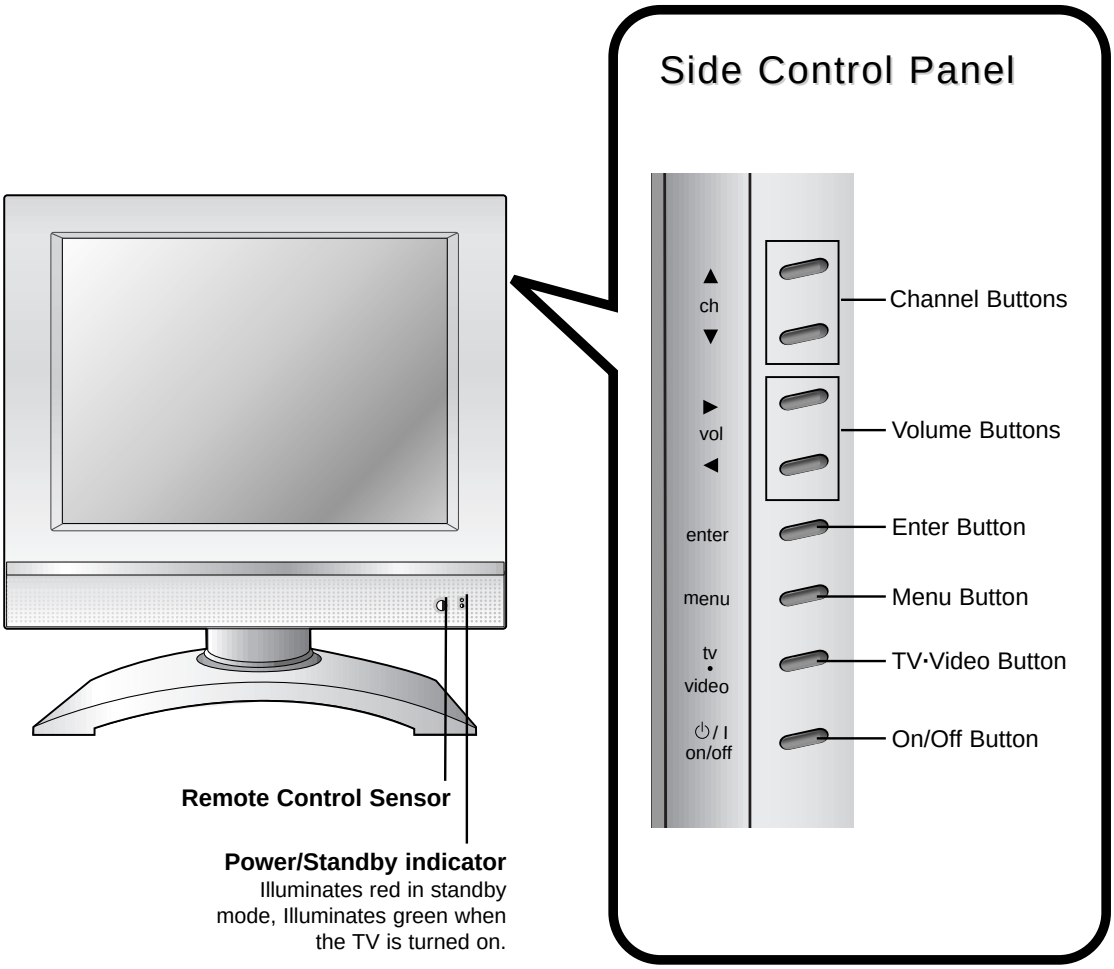
SPECIFICATIONS

Model	L13V36
Horizontal size (inches)	13.6
Height (inches)	14.4
Depth (inches)	2.4
Weight (pounds)	10
Power requirements	AC 110-240V ~ 50/60Hz
Television system	NTSC
Television channels	VHF : 2 ~ 13, UHF : 14 ~ 69 Cable : 1 ~ 125
Television Screen	LCD Panel
Power consumption	45 W
Audio output	1 W x 2
External input ports	Power cord socket (1) Component (480i) input (1 set) S-VIDEO input (1) Headphone jack (1) Video/Audio input (1 set) Antenna input (1)
Power supply cord set	Standard North America three wire earth-grounding with flexible cord SJT type or higher type.

CAUTION: If replacing a part becomes necessary, replace the part with an exact duplicate. Contact any Zenith authorized service center.

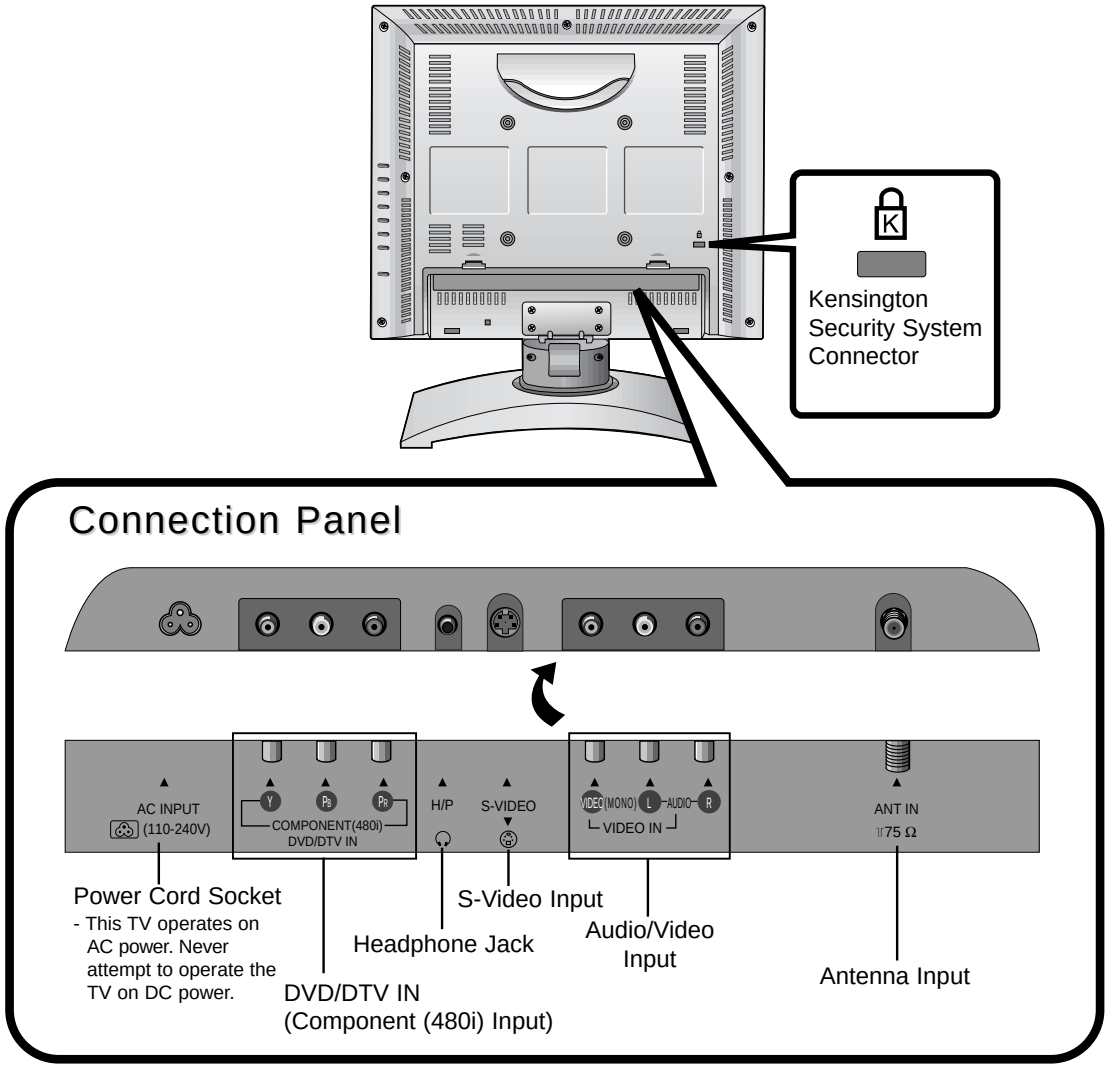
DESCRIPTION OF CONTROLS

Front of the TV



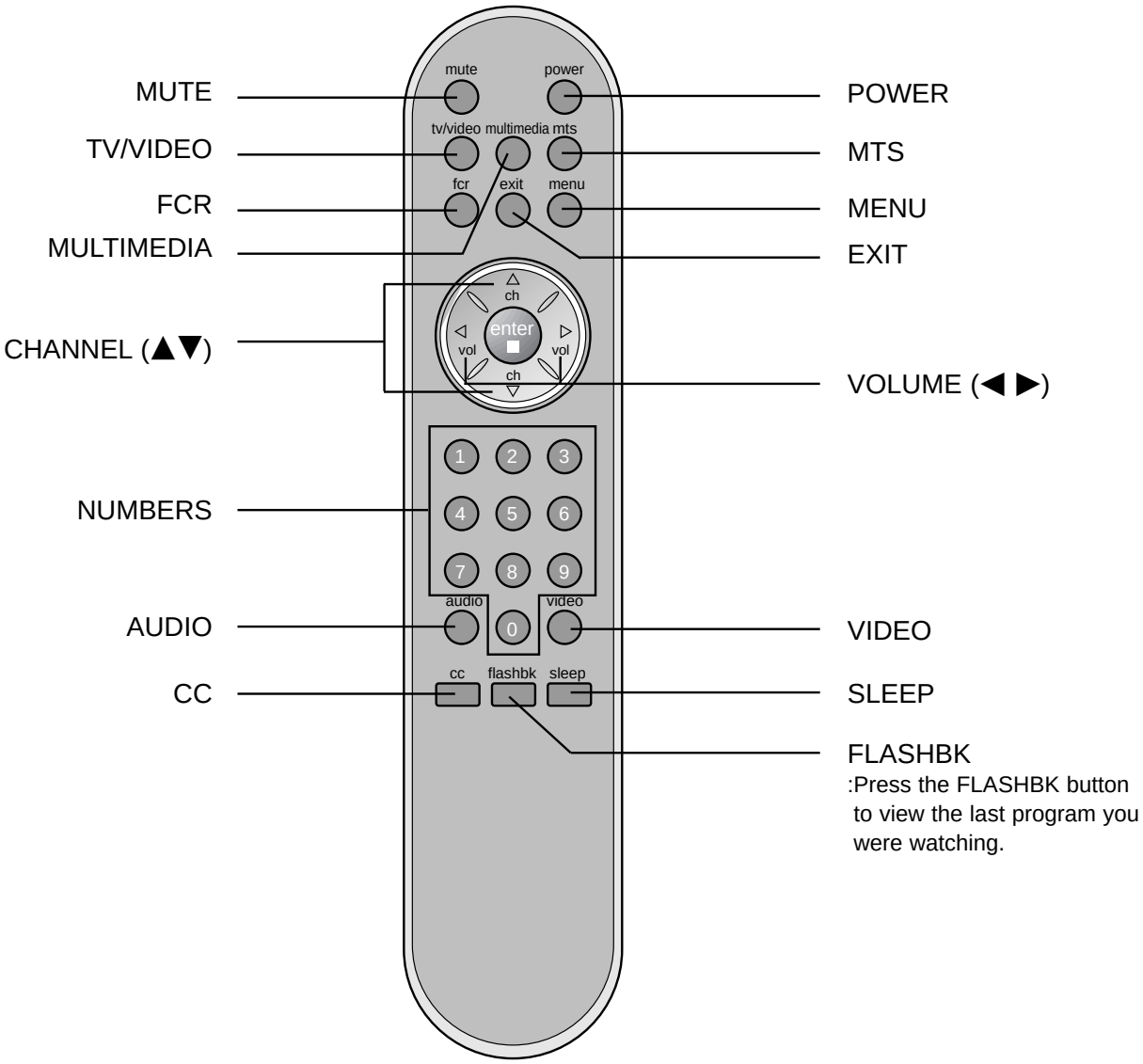
DESCRIPTION OF CONTROLS

Back of the TV



DESCRIPTION OF CONTROLS

Remote Control Buttons



ADJUSTMENT INSTRUCTIONS

1. Application Object

This instruction is for the application to the LCD TV, ML-024B/C.

2. Notes

(1) Connect the power correctly, then start the adjustment.
(2) The adjustments must be performed in the correct sequence.
(3) The adjustments must be performed in the circumstance of 25±5˚C of temperature and 65±10% of relative humidity.
(4) The set must be operated for 15 minutes prior to adjustment.

- 'Heat Run' must be performed with the full white signal or TV noise signal.
- The time for 'Heat Run' can be changed due to production changes.
- Condition of Line Test : Standard color signal - 65±1dBuV

3. Y.Pb.Pr LEVEL Adjustment

Only ML-024B

3-1. Required Test Equipment

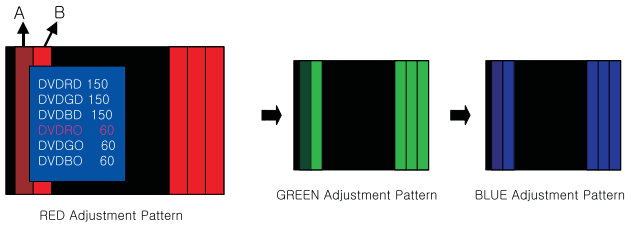
(1) 802F(QUANTUM DATA: Video Test Generator)
(2) Remote control for adjustment

3-2. Preparation for Adjustment

(1) Adjustment Pattern: R/G/B Color Bar Adjustment Pattern (Refer to Fig. 1)

3-3. Adjustment

(1) Set with Component mode paragraph exchange.
(2) Setting the signal Format of signal equipment is to be 480P.
(3) Input the Component Jack of the Set with DTV output (Y.Pb.Pr) of adjustment equipment.
(4) With lower part Fig. 1 the same Pattern does to come out in the Set.
(5) Enter the adjustment mode using IN-START Key of Adjust Remocon.
(6) Enter the Component adjustment mode with Fig. 1.
(7) From R Color Bar adjustment Pattern value of the DVDRO using Vol Key of Adjust Remocon adjust disappear A Pattern of Fig. 1. (When reduces the Data value, Pattern of the A comes to dawn)
(8) When the adjustment of the DVDRO is completed, input adjustment Pattern in G --> B order and adjust DVDGO --> DVDBO and adjust the Pattern of the A not to be visible.
(9) When the adjustment is completed in DVDRO --> DVDGO --> DVDBO order, adjust adjustment data of the DVDRO to be -3 Step and memory adjustment data using ENTER of Adjust Remocon.
(10) After adjustment is completed, exit the adjustment mode using EXIT Key of Adjust Remocon.

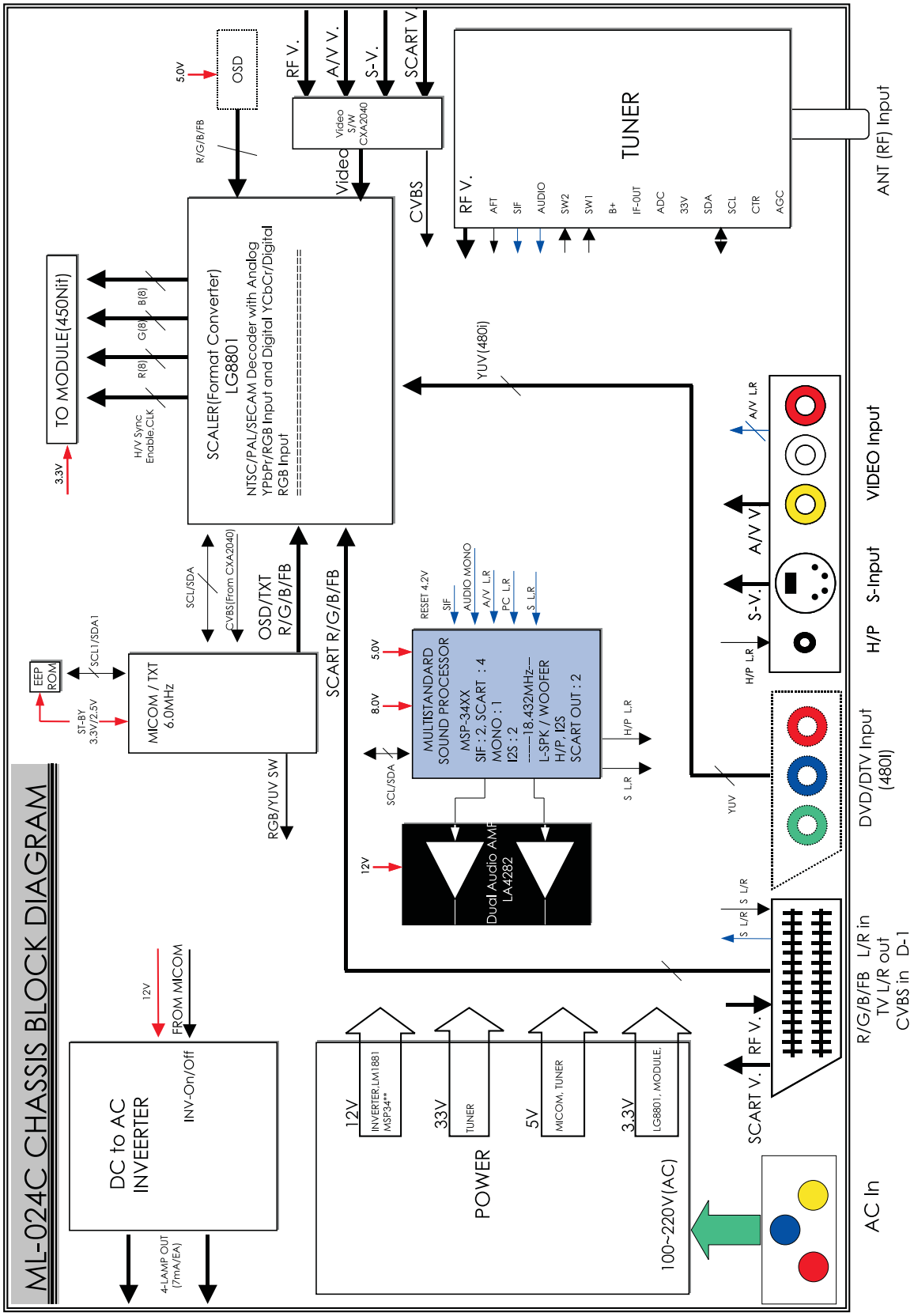


(Fig. 1)

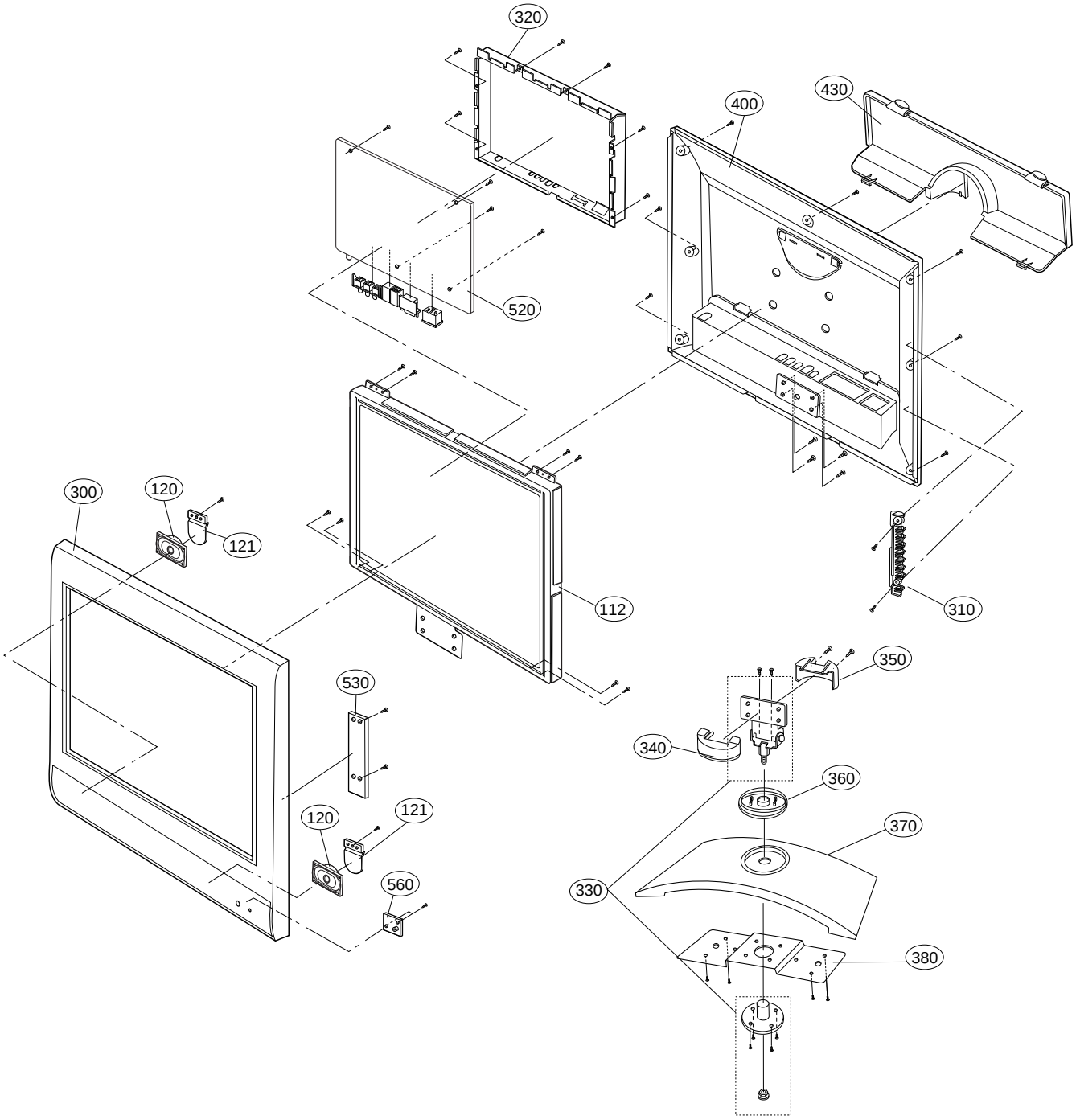
4. Option

No.	Item	Specification	Remark
1	COMPO	0	Component input mode 0 : not ready 1 : ready
2	3SYS	0	Video input applicable system 0 : NTSC-M(North America) 1 : NTSC-M & PAL-M/N multi(South America)
3	BLUEB	1	No - signal Video mode 0 : Black-Back 1 : Blue-Back

BLOCK DIAGRAM



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

No.	PART NO.	DESCRIPTION
112	6306V13001A	LCD MODULE,LC130V01-A2 LG PHILPS TFT COLOR VGA
120	6400VA0017A	SPEAKER,GENERAL T401SX-095K14 8 OHM 1.0/1.5W 81DB
121	4950V00170A	METAL,HOLDER SECC(EGI)
300	3091V00493B	CABINET ASSEMBLY,RU-13LA60 STEREO ML024C ZENITH
310	5020V00778B	BUTTON,CONTROL RU-13LA60 ABS, HF-380 8KEY
320	4950V00144B	METAL,FRAME SECC(EGI) RJ-13LA60,PRESS DIE
330	4950V00157B	METAL,HINGE ASSY NON RJ-13LA60
340	3550V00300C	COVER,FRONT RJ-13LA60 ABS
350	3550V00301C	COVER,REAR RJ-13LA60 ABS HINGE
360	4810V00785B	BRACKET,DECO RU-13LA60 NON ABS, HF-380
370	4810V00784C	BRACKET,STAND RJ-13LA60 ML024C ABS
380	4950V00161A	METAL,BASE EGI STAND
400	3809V00341B	BACK COVER ASSEMBLY,RU-13LA60 NON ZENITH
430	3550V00302C	COVER,REAR AV RJ-13LA60 ABS .
520	6871VMMQ08A	PCB ASSEMBLY,MAIN ML-024C RU-13LA60
530	6871VSMV23A	PCB ASSEMBLY,SUB CONT ML024C CONTROL 13
560	6871VSMV22A	PCB ASSEMBLY,SUB POWER ML024C POWER 13

REPLACEMENT PARTS LIST

For Capacitor & Resistors, the charactors at 2nd and 3rd digit in the P/No. means as follows;
CC, CX, CK, CN : Ceramic
CQ : Polyestor
CE : Electrolytic
RD : Carbon Film
RS : Metal Oxide Film
RN : Metal Film
RF : Fusible

RUN DATE : 2003.6.12

LOCA. NO	PART NO	DESCRIPTION
IC		
IC100	0IZZVC0066A	M27C512_10F1 DIP 32P DIP 52PIN
IC101	0IAL241610B	AT24C16A-10PI-2.7 8PIN
IC102	0IFA752700A	KA75270Z 3 TP RE-SET IC
IC351	0IMCRFA010A	KA7809R, FAIRCHILD 2P D-PAK
IC352	0ISO204000A	CXA2040AQ 32P,QFP BK IIC BUS VIDEO
IC501	0IMCRTW001B	LG8801-H 160P QPFD TRAY SCALER+VIDEO
IC502	0ICTMMO004A	SC786108DWR2 MOTOROLA 16 R/TP OSD
IC51	0ITK118100B	TK11840L 8P SOT23L R/TP DC-DC CONVERTER
IC52	0IMCRRH005A	UM6K1N 6P SOT363 R/TP 30V 0.1A
IC53	0IMCRRH005A	UM6K1N 6P SOT363 R/TP 30V 0.1A
IC601	0IMCRMN014A	MSP3440G QA B8 V3 80 QFP TRAY SOUND
IC602	0ISA428200A	LA4282 12S 2CHX10W AUDIO AMP
IC603	0IKE704200J	KIA7042AF SOT-89 TP 4.2V
IC604	0IMCRFA009A	KA78M08RTM 2P D-PAK, R/TP REGULATOR IC
IC701	0IMCRFA017A	KA3883C 8 SOP R/TP SMPS CONTROLLER
IC702	0IMCRFA007A	KA431Z 3DIP,TO-92 TP SHUNT REGULATOR
IC703	0IMCRFA016A	KA78RH33 2P D-PAK R/TP 800MA
IC704	0IKE780500P	KIA78L05BP(AT) 3P 5V,150MA
IC707	0IMCRKE006B	KIA278R33PI TO-220IS 4P ST 3.3V
IC708	0IKE780500Q	KIA7805API 3P TO-220 ST REGULATOR 5V
IC709	0IKE780500Q	KIA7805API 3P TO-220 ST REGULATOR 5V
IC710	0IMCRKE006B	KIA278R33PI KEC TO-220IS 4P ST 3.3V
PC1	0ILI817000G	LTV817M-VB 4P,DIP BK PHOTO COUPLER
PC2	0ILI817000G	LTV817M-VB 4P,DIP BK PHOTO COUPLER
Q101	0IFA270000A	2N7000TA TO-92, 3P TP LEVEL SHIFT 60V/0.2A
Q102	0IFA270000A	2N7000TA TO-92, 3P TP LEVEL SHIFT 60V/0.2A
Q54	0IMCRRH004A	5P SOT353 R/TP DUAL SWITCHING TR
TRANSISTOR		
IC2	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A SO-8
IC705	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A SO-8
IC706	0TF492509AA	SI4925DY TP TEMIC 30V 6.1A SO-8
Q1	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q100	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1101	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1102	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q1103	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q200	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q201	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q202	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q353	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q403	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q406	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q502	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q51	0TRKE80021A	KTC5103D KEC R/TP D-PAK 60V 5A
Q510	0TR150400BA	CHIP 2SA1504S(ASY) KEC

LOCA. NO	PART NO	DESCRIPTION
Q52	0TRKE80021A	KTC5103D KEC R/TP D-PAK 60V 5A
Q53	0TFVI80034A	SUD45P03-15
Q55	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q56	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q57	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q651	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q701	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q702	0TR150400BA	CHIP 2SA1504S(ASY) KEC
Q703	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q704	0TFFC10007A	FQPF12N60 ST TO220 600V 10.5A
Q705	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q801	0TR387500AA	CHIP 2SC3875S(ALY) KEC
Q802	0TR150400BA	CHIP 2SA1504S(ASY) KEC
DIODE		
D100	0DD181009AB	KDS181 TP KEC - 85V 300MA
D51	0DD181009AB	KDS181 TP KEC - 85V 300MA
D52	0DD181009AB	KDS181 TP KEC - 85V 300MA
D53	0DD181009AB	KDS181 TP KEC - 85V 300MA
D54	0DD181009AB	KDS181 TP KEC - 85V 300MA
D55	0DRDI00028B	B350A DIODES R/TP SMA 35V 3A
D56	0DRDI00028B	B350A DIODES R/TP SMA 35V 3A
D57	0DD181009AB	KDS181 TP KEC - 85V 300MA
D601	0DD181009AB	KDS181 TP KEC - 85V 300MA
D602	0DD181009AB	KDS181 TP KEC - 85V 300MA
D701	0DB260000AA	G2SBA60 BK G.I - 600V 1.5A 60A - 5UA
D702	0DD100009AM	EU1ZV(1) TP SANKEN
D703	0DD140009AA	EK14 V(1) TP E/EO-TMD 40V 1.5A
D704	0DD100009AM	EU1ZV(1) TP SANKEN
D706	0DR060009AA	TVR06J TP DO41 600V 0.6A
D707	0DRSD00091A	SF20JC10 100V 20A 200A .SEC 0.7MA
D709	0DRSD00091A	SF20JC10 100V 20A 200A .SEC 0.7MA
LED1	0DL200000CA	LED,SAM5670(DL-2LRG) BK Y-GREEN
ZD202	0DZRM00178A	ZENERS,UDZS TE-17 5.1B
ZD203	0DZRM00178A	ZENERS,UDZS TE-17 5.1B
ZD400	0DZ330009BA	ZENERS,HZT33
ZD701	0DZ180009AG	ZENERS,MTZJ18B
ZD702	0DZ150009AD	ZENERS,MTZJ15B
ZD703	0DZ820009AH	ZENERS,MTZJ8.2B
CAPACITOR		
C10	0CE227DF618	220UF STD 16V M
C101	0CE107BF618	100UF KME 16V M
C113	0CE107BF618	100UF KME 16V M
C128	0CE227BH618	220UF KME 25V M
C209	0CE476DF618	47UF STD 16V M
C211	0CE106DF618	10UF STD 16V M
C215	0CE106DF618	10UF STD 16V M

REPLACEMENT PARTS LIST

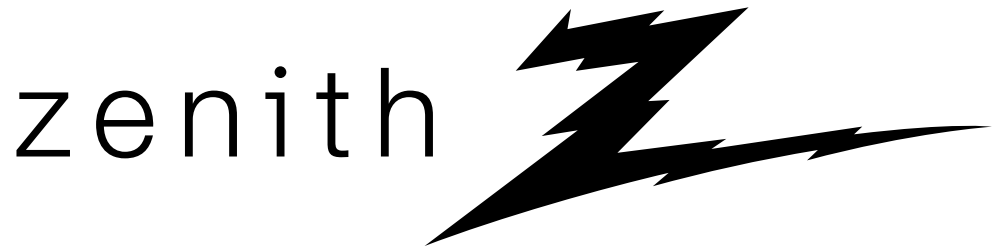
LOCA. NO	PART NO	DESCRIPTION
C216	0CE106DF618	10UF STD 16V M
C289	0CE104DK618	0.1000UF STD 50V M
C302	0CE476DF618	47UF STD 16V M
C315	0CE476DF618	47UF STD 16V M
C317	0CE476DF618	47UF STD 16V M
C351	0CE227DF618	220UF STD 16V M
C353	0CE475DK618	4.7UF STD 50V 20%
C354	0CE476DF618	47UF STD 16V M
C356	0CE106DF618	10UF STD 16V M
C357	0CE106DF618	10UF STD 16V M
C362	0CE107DF618	100UF STD 16V M
C364	0CE336DF618	33UF STD 16V M
C380	0CE105DK618	1UF STD 50V M
C381	0CE106DF618	10UF STD 16V M
C403	0CE476DH618	47UF STD 25V 20%
C404	0CE108DD618	1000UF STD 10V M
C408	0CE106DK618	10UF STD 50V M
C412	0CE105DK618	1UF STD 50V M
C499	0CE476DF618	47UF STD 16V M
C501	0CE107DF618	100UF STD 16V M
C523	0CE104DK618	0.1000UF STD 50V M
C526	0CE107DF618	100UF STD 16V M
C541	0CE107DF618	100UF STD 16V M
C581	0CE107DF618	100UF STD 16V M
C60	0CK105DF64A	1UF 2012 16V 20%
C601	0CE477BF618	470UF KME 16V M
C602	0CE477BF618	470UF KME 16V M
C605	0CE107BF618	100UF KME 16V M
C613	0CE106DF618	10UF STD 16V M
C614	0CE106DF618	10UF STD 16V M
C616	0CE107DF618	100UF STD 16V M
C617	0CE107BF618	100UF KME 16V M
C62	0CK105DF64A	1UF 2012 16V 20%
C620	0CE335DK618	3.3UF STD 50V 20%
C621	0CE107BF618	100UF KME 16V M
C626	0CK224DF56A	220000PF 2012 16V 10%
C627	0CK224DF56A	220000PF 2012 16V 10%
C629	0CE107DF618	100UF STD 16V M
C633	0CE107DF618	100UF STD 16V M
C643	0CE476BF618	47UF KME TYPE 16V 20%
C646	0CE225DK618	2.2UF STD 50V 20%
C647	0CE225BK618	2.2UF KME TYPE 50V 20%
C648	0CQ1031N509	0.01U 100V K
C649	0CQ1031N509	0.01U 100V K
C651	0CE107BH618	100UF KME 25V M
C652	0CE107BF618	100UF KME 16V M
C654	0CE476BF618	47UF KME TYPE 16V 20%
C67	0CE337ZF638	330UF SEP 16V 20%
C69	0CE107BH618	100UF KME 25V M
C698	0CK224DF56A	220000PF 2012 16V 10%
C699	0CK224DF56A	220000PF 2012 16V 10%

LOCA. NO	PART NO	DESCRIPTION
C700	181-091D	DEHR33A102KN2A 1000PF 1KV 10%,-10%
C701	0CF474285B0	0.47UF S 275V 10%
C702	0CF334285B0	0.33UF S 275V 10%
C703	181-120N	1000PF 4KV M
C704	181-120N	1000PF 4KV M
C706	0CE476BK618	47UF KME 50V M
C707	0CE1072V610	100UF KMF 450V 20%
C708	181-091D	DEHR33A102KN2A 1000PF 1KV 10%,-10%
C709	181-091U	R 220PF 2KV 10%,-10%
C717	181-091D	DEHR33A102KN2A 1000PF 1KV 10%,-10%
C718	181-091D	DEHR33A102KN2A 1000PF 1KV 10%,-10%
C719	0CE227DK618	220UF STD 50V M
C720	181-091D	DEHR33A102KN2A 1000PF 1KV 10%,-10%
C721	0CE4772J618	470UF KMF 35V 20%
C722	0CE477BF618	470UF KME 16V M
C723	0CE477BF618	470UF KME 16V M
C725	0CE4772J618	470UF KMF 35V 20%
C726	0CE477BF618	470UF KME 16V M
C730	0CE4772J618	470UF KMF 35V 20%
C731	0CE477BF618	470UF KME 16V M
C732	0CE4772J618	470UF KMF 35V 20%
C733	181-120K	2200PF 4KV M E
C734	0CE4772J618	470UF KMF 35V 20%
C735	0CE477BF618	470UF KME 16V M
C736	0CE4772J618	470UF KMF 35V 20%
C777	181-091D	DEHR33A102KN2A 1000PF 1KV 10%,-10%
C799	0CE107BF618	100UF KME 16V M
COIL & TRANSFORMER		
L401	0LA0272K139	INDUCTOR,27UH K
L51	6140VR0004A	COIL,953AS-330M=P3, 33UH R/T
L52	6140VR0004A	COIL,B953AS-330M=P3, 33UH R/T
T51	6170VH0001A	TRANSFORMER,INVERTER 969HG-K003 8.985UH
T52	6170VH0001A	TRANSFORMER,INVERTER 969HG-K003 8.985UH
T701	6170VMCA47A	TRANSFORMER,SMPS[COIL] EER3016 510UH
RESISTOR		
FR704	0RP0020J809	0.02 OHM 1 W 20%
L502	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
L503	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
L504	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
L505	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
L506	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
L507	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
L518	0RRZVTA001A	MNR-14-E0A-J-101 R OHM 100 OHM 5%
R200	0RD1000H609	100 OHM 1/2 W 5.00%
R201	0RD1000H609	100 OHM 1/2 W 5.00%
R51	0RS6800J607	680 OHM 1 W 5.00%
R54	0RS6800J607	680 OHM 1 W 5.00%
R69	0RN1302F409	13K OHM 1/6 W 1.00%
R70	0RN4701F409	4.7K OHM 1/6 W 1.00%

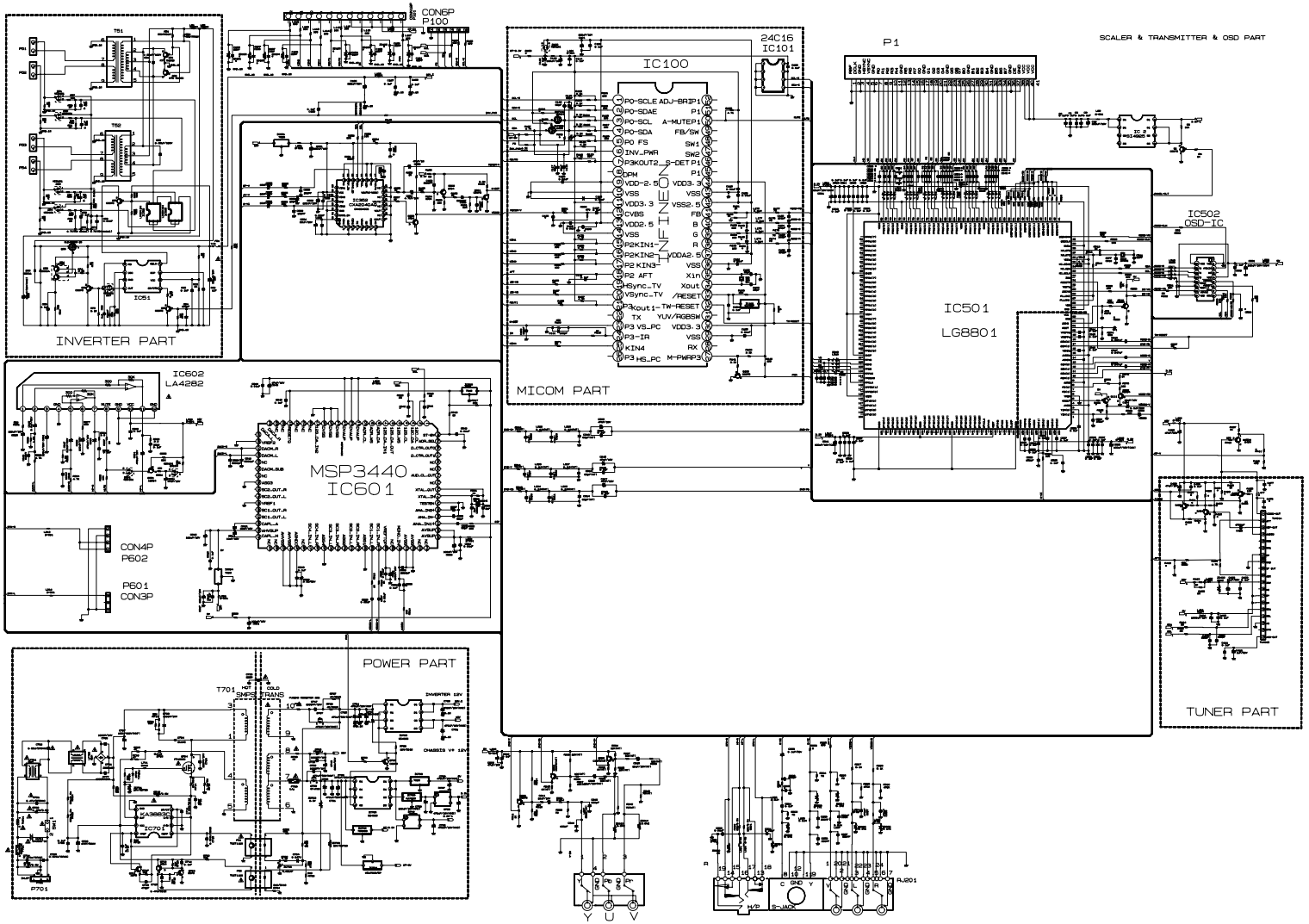
REPLACEMENT PARTS LIST

LOCA. NO	PART NO	DESCRIPTION
R701	0RS5602K619	56K OHM 2 W 5.00%
R702	0RKZVTA001C	8.2M OHM 1/2 W 5%
R703	0RKZVTA001K	0.47M OHM 1/2 W 5%
R704	0RS5602K619	56K OHM 2 W 5.00%
R705	0RS5602K619	56K OHM 2 W 5.00%
R705	0RS3902K619	39K OHM 2 W 5.00%
R706	0RS3902K619	39K OHM 2 W 5.00%
R707	0RD3303H609	330K OHM 1/2 W 5.00%
R71	0RN4701F409	4.7K OHM 1/6 W 1.00%
R711	0RS5602K619	56K OHM 2 W 5.00%
R712	0RD6803H609	680K OHM 1/2 W 5.00%
R715	180-A01R	2 W RW ROUND G 0.39
R727	0RD0472H609	47 OHM 1/2 W 5.00%
R728	0RD0472H609	47 OHM 1/2 W 5.00%
SWITCH		
SW1101	140-313A	SWITCH,TACT 2LEAD 100G
SW1102	140-313A	SWITCH,TACT 2LEAD 100G
SW1103	140-313A	SWITCH,TACT 2LEAD 100G
SW1104	140-313A	SWITCH,TACT 2LEAD 100G
SW1105	140-313A	SWITCH,TACT 2LEAD 100G
SW1106	140-313A	SWITCH,TACT 2LEAD 100G
SW1107	140-313A	SWITCH,TACT 2LEAD 100G
SW1108	140-313A	SWITCH,TACT 2LEAD 100G
FILTER & CRYSTAL		
L101	6210TCE001G	FILTER,EMC HH-1M3216-501
L102	6210TCE001G	FILTER,EMC HH-1M3216-501
L119	6210TCE001A	FILTER,EMC HB-1S2012-080JT
L200	6210TCE001A	FILTER,EMC HB-1S2012-080JT
L201	6210TCE001A	FILTER,EMC HB-1S2012-080JT
L202	6210TCE001A	FILTER,EMC HB-1S2012-080JT
L204	6210TCE001A	FILTER,EMC HB-1S2012-080JT
L205	6210TCE001A	FILTER,EMC HB-1S2012-080JT
L206	6210TCE001G	FILTER,EMC HH-1M3216-501
L207	6200JB8010L	FILTER,EMC MLB-201209-1000L-N2
L213	6210TCE001G	FILTER,EMC HH-1M3216-501
L214	6210TCE001G	FILTER,EMC HH-1M3216-501
L351	6210TCE001G	FILTER,EMC HH-1M3216-501
L400	6210TCE001G	FILTER,EMC HH-1M3216-501
L402	6210TCE001G	FILTER,EMC HH-1M3216-501
L501	6210TCE001G	FILTER,EMC HH-1M3216-501
L515	6210TCE001G	FILTER,EMC HH-1M3216-501
L516	6210VC0004A	FILTER,EMC BK3216 4S600
L517	6210TCE001G	FILTER,EMC HH-1M3216-501
L580	6210TCE001A	FILTER,EMC HB-1S2012-080JT
L600	6210TCE001G	FILTER,EMC HH-1M3216-501
L601	6210TCE001G	FILTER,EMC HH-1M3216-501
L602	6210TCE001G	FILTER,EMC HH-1M3216-501
L603	6210TCE001G	FILTER,EMC HH-1M3216-501
L701	125-022K	FILTER,EMC FERRITE 1UH

LOCA. NO	PART NO	DESCRIPTION
L99	6210TCE001G	FILTER,EMC HH-1M3216-501
LF701	6200JB8010U	FILTER,EMC OR 14*7*7.5H SMC BK 6.0MH-11.0MH
LF702	6200JB8010U	FILTER,EMC OR 14*7*7.5H SMC BK 6.0MH-11.0MH
R505	6210TCE001A	FILTER,EMC HB-1S2012-080JT
Z100	156-A01L	RESONATOR,CRYSTAL HC49U 6.000MHZ
Z500	156-A02X	RESONATOR,CRYSTAL HC49U 27.000MHZ
Z600	156-A02M	RESONATOR,CRYSTAL HC49U 18.432MHZ
MISCELLANEOUS		
F701	0FS3151B51D	FUSE,SLOW BLOW 3150MA 250V
P1101	6631V20014D	CONNECTOR ASSEMBLY,12P 2.0MM
P1102	387-A07X	CONNECTOR ASSEMBLY,7P 2.5MM
P701	6620VZ0002A	SOCKET,DRAWING IS7007 I-SHENG AC
P901	6612VJH008D	JACK,RCA PJ6063D DVD IN 3P
PA1101	6726VV0006D	REMOTE CONTROLLER RECEIVER,38.0KHZ
RJ201	6613V00008F	JACK ASSY,PMJ014F E/P(ST)+S-VHS+3P
TH701	163-048D	THERMISTOR,KL15L2R5 +/- 15% 125V
TU401	6700VNF019E	TUNER,TAFH-H001P LG NTSC FS
VA701	164-003K	VARISTOR ,SVC621D-14A 620V 0%
ACCESSORIES		
A1	3828VA0359M	MANUAL,OWNERS ML024C ZENITH EN
A2	6710V00091H	REMOTE CONTROLLER,ML024C
A3	6410VUH007A	POWER CORD,SP305+IS034 1800MM


zenith

CIRCUIT DIAGARM FOR ML024C CHASSIS



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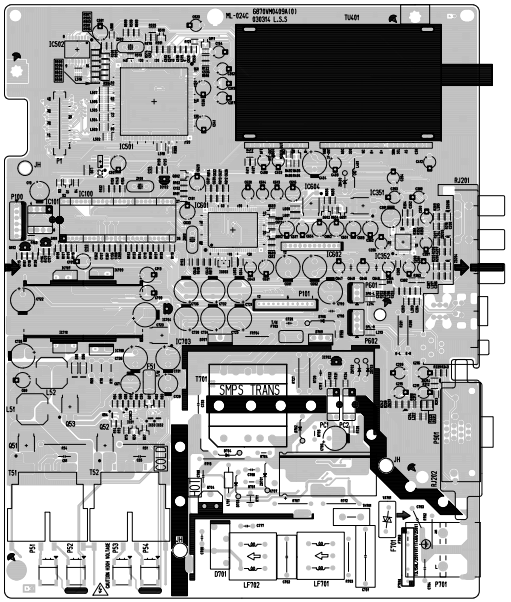

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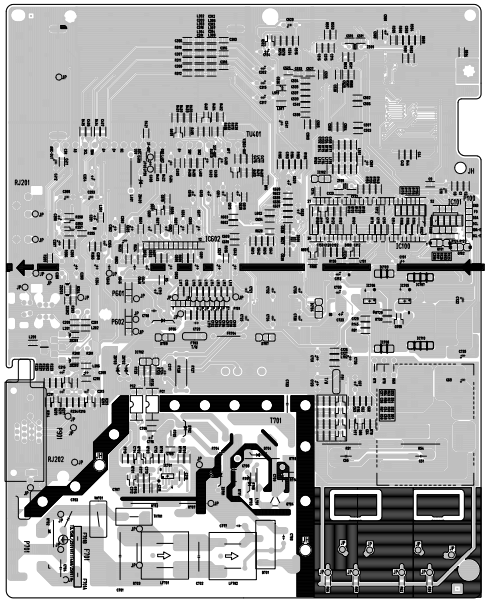

CONTROL

POWER